Pilot's Perspective: The Road to Future I-CNS Applications

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Focus

- Economic viability
- Current infrastructure and services
- Near- term decisions
- FAA funding

Criteria

- Safety
- Capacity
- Timeline
- Cost
- Risk

Criteria

- Safety-Safety is paramount!
- Capacity
- Timeline
- Cost
- Risk

Criteria

- Safety
- Capacity- levels must be maintained or exceeded
- Timeline
- Cost
- Risk

Criteria

- Safety
- Capacity
- Timeline- realistic and achievable
- Cost
- Risk

Criteria

- Safety
- Capacity
- Timeline
- **Cost-** Maximize improvements within severely constrained FAA budget
- Risk

Criteria

- Safety
- Capacity
- Timeline
- Cost
- Risk- relatively low risk

ALPA Support of Projects in the Short Term (0-3 yrs.)

- En Route Automation Modernization
- Performance Based Operations in the NAS
  - RNAV /RNP
- Collaborative Decision Making (CDM)
- Other Programs
  - Runway Incursions
  - Domestic Reduced Vertical Separation Minima (DRVSM)
  - Support Streamlining Changes in the FAA Structure
  - Converging Runway Display Aid (CRDA)
  - Safe Flight 21
  - Wake Turbulence Research

Government / Industry Plans Affecting Future I-CNS Applications

- RTCA Concept of Operations
- FAA Strategic Plan (Flight Plan 2004-2008)
- Operational Evolution Plan (OEP)
- NAS Architecture 5.0
  - Target System Descriptions (TSD)
- "Growth Without Gridlock"
- National Airspace Research Plan (NARP)
- Capital Investment Plan (CIP)
- Concept for Implementing a Performance-Based National Airspace System (NAS)

En Route Automation Modernization (ERAM)

- Key piece
- Current HOST
- Examples of ERAM I-CNS applications
  - Controller-Pilot-Data Link Communications
  - Performance Based Operational System
  - Automatic Dependant Surveillance- Broadcast (ADS-B)
  - NAS status and Aeronautical Information Management (AIM)
  - Collaborative Decision Making (CDM)

Performance- Based Operations

- Payoff
- Change of paradigm
- Do not limit NAS
- Keys to Performance Based Operations in NAS

Performance- Based Operations

- Keys to Performance Based Operations in NAS
  - Expectations
  - Training
  - Policy changes
  - Development of future I-CNS applications

Collaborative Decision Making (CDM)

- CDM Goal
- Today's operations
- "Growth Without Gridlock"
- Future I-CNS CDM projects
  - Better information
  - Common picture
  - Improve information flows

Conclusions

Future I-CNS projects:

Will depend on policies and funding decisions

- Safety
- Capacity
- Access

Conclusions

Future I-CNS projects:

Should fit within the government / industry agreed upon documents

Conclusions

Future I-CNS projects:

Should use existing avionics capabilities

Conclusions

Future I-CNS projects:

Should upgrade HOST to ERAM and integrate I-CNS applications into ERAM

- ADS-B
- CPDLC
- AIM

Questions ?

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ALPA National Airspace System Modernization Committee